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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,100	10/02/2003	Hyoung-Jo Jeon	1572.1153	8392

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WASHINGTON, DC 20005

EXAMINER
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SMITH, JEFFREY S

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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06/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/676,100

**Applicant(s)**

JEON ET AL.

**Examiner**

Jeffrey S. Smith

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10, 17-19, 21, 22 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 17-19, 21, 22 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Requirement for Information***

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

In response to this requirement, please provide answers to each of the following interrogatories eliciting factual information that is known by the applicant and the assignee of this application:

1. Did the applicant or the assignee of this application file any applications in any country that claim foreign priority to application number 2002-80340 filed in Korea? Please respond by answering "yes" if any such applications have been filed or by answering "no" if no such applications have been filed.
2. If any such applications have been filed and have received any rejections, please submit copies of each rejection.
3. Please indicate the current status of each application that is or claims priority to application number 2002-80340 filed in Korea on December 16, 2002.
4. Did the Korean Patent Office issued any rejections in application number 2002-80340 filed in the Republic of Korea on December 16, 2002?
5. If the Korean Patent Office did make any rejections, please submit a copy of each rejection.
6. In application number 2003-367978 filed in Japan on October 28, 2003, did the applicant overcome the rejection from the Japanese Patent Office issued on

February 22, 2005? If so, please submit an English language translation of the amendment to the claims and the response made by applicant that overcame this rejection.

7. Did the Japanese Patent Office make any rejections subsequent to the rejection from the Japanese Patent Office issued on February 22, 2005? Please respond by answering "yes" if the Japanese Patent Office did make any subsequent rejections or by answering "no" if the Japanese Patent Office did not make any subsequent rejections.

8. If the Japanese Patent Office did make any subsequent rejections, please submit copies of each subsequent rejection made by the Japanese Patent Office. Also, please submit English language translations of the material portions of any art cited by the Japanese Patent Office in the subsequent rejections.

9. Did the Japanese Patent Office allow any claims in application number 2003-367978?

10. For each independent claim allowed by the Japanese Patent Office, please submit an English language translation of the allowed claim.

This information is material to patentability. Applicant is reminded that failure to fully reply to this requirement for information will result in a holding of abandonment. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the lightpath changing apparatus operates in a manner of one of a galvanometer mirror and a prism as recited in claim 1, and the lightpath changing apparatus operates in a manner of a galvanometer mirror as recited in claim 26 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The element of claim 6 is identical to the last element of claim 1.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 17-19, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese application no. 10-257084, submitted in the IDS, which was published March 31, 2000 by Atsushi et al. ("Atsushi").

For claim 1, Atsushi discloses an image displaying apparatus 16 which displays an image, an image taking apparatus (2, 6) to take the image displayed in the image displaying apparatus, an optical characteristic changing apparatus 4 provided between the image taking apparatus and the image displaying apparatus, which changes optical characteristics of the displayed image; a lightpath changing apparatus (10) which changes a lightpath of the displayed image, and an image processor 14 which receives a plurality of images (VA, VB') having respective changed lightpaths from the image

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taking apparatus and generates a processed image with a moire' removed by correcting or superposing the size and brightness of the plurality of images (see figure 1, see also figure 16). Atsushi discloses a lightpath changing apparatus that operates in a manner of one of a galvanometer mirror and a prism. Although the words "half mirror" and "prism" are not identical, the element called half mirror in the prior art is identical to the element called prism in the claim because both elements perform the same function in the same way to achieve the same result, which is changing the lightpath by refracting light. The claim only requires one of a galvanometer mirror and a prism, not both.

For claim 2, Atsushi discloses a position controller 15 which controls the lightpath changing apparatus to change the lightpaths of the respective images.

For claim 3, the position controller moves the displaying apparatus, the image taking apparatus takes an image of the displayed image at each predetermined position, and the image processor generates the processed image with the moire' removed by superposing the plurality of the images taken at the plurality of predetermined positions.

For claim 4, the position controller moves the lens ("optical characteristic changing apparatus"), the camera ("image taking apparatus"), and the lightpath changing apparatus relative to the image as shown in Figure 15.

For claim 6, Atsushi has one of a mirror and a prism (element 10 of figure 1).

For claims 7-10, the moire' is removed by correcting a shape or a brightness of each image (see paragraph 94).

For claim 17, taking a first image, taking a second image, and superposing the first and second images is shown in Figure 1. Also, paragraph 96 discusses picking up pixel VE in sixteen places with respect to the pickup field of vision using the method as in figure 13 (a), clearly the only way to pick up a pixel in sixteen places is to take additional images.

For claim 18, adjusting an aspect ratio is performed by image processor 14 as shown in Figure 1.

For claim 19, adjusting brightness is performed by image processor 14.

For claims 21-22, taking an additional image is performed by the devices shown in Figures 1, 16, and 17. Repeating these tasks and superposing is also performed by each of these devices.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atsushi in view of U.S. Patent Number 3,882,273 issued to Knox.

Knox discloses in figures 2a and 2b a galvanometer mirror, and in figures 3a and 3b a prism. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to replace the lightpath changing apparatus of Atsushi with the



lightpath changing galvanometer mirror of Knox, because Knox teaches that the galvanometer mirror and the prism are interchangeable lightpath changing devices (column 4 lines 22-45).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Smith whose telephone number is 571 270-1235. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS  
June 6, 2007

  
JINGGE WU  
SUPERVISORY PATENT EXAMINER